



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/964,270	09/26/2001	Michael A. Guillorn	UBAT:033US/JJB	9947
38396	7590	08/09/2004	EXAMINER	
JOHN BRUCKNER, P.C. 5708 BACK BAY LANE AUSTIN, TX 78739			QUARTERMAN, KEVIN J	
			ART UNIT	PAPER NUMBER
			2879	
DATE MAILED: 08/09/2004				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/964,270

Applicant(s)

GUILLORN ET AL.

Examiner

Kevin Quarterman

Art Unit

2879

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 May 2004.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 20 and 22-47 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 20 and 22-47 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 26 September 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

1. Applicant's amendment filed 12 May 2004 has been entered and overcomes the objection to the drawings.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 20 and 22-47 are rejected under 35 U.S.C. 102(b) as being anticipated by Simpson (US 6692324).
4. Regarding independent claim 20, Figure 3G of Simpson shows an apparatus comprising an electrically conductive interconnect (305) formed on at least a part of an insulating surface on a substrate (300) and at least one vertically aligned carbon nanofiber (360) coupled to the electrically conductive interconnect.
5. Regarding claim 22, Figure 10E of Simpson shows the at least one vertically aligned carbon nanofiber including a plurality of substantially vertically aligned carbon nanofibers.
6. Regarding claim 23, Figure 3G of Simpson shows a catalyst (320) coupled to the at least one vertically aligned carbon nanofiber.
7. Regarding claim 24, Simpson discloses the catalyst including at least one metal selected from the group consisting of nickel, iron, and cobalt (col. 6, ln. 67).

Art Unit: 2879

8. Regarding claim 25, Simpson discloses the substrate including at least one member selected from the group consisting of silicon, quartz, sapphire and magnesia (col. 6, ln. 59-60).
9. Regarding claim 26, Simpson discloses the substrate being optically transmissive, since it is made of the same material (MPEP § 2112.01).
10. Regarding claim 27, Simpson discloses the electrically conductive interconnect including at least one refractory metal selected from the group consisting of W, Mo, Ta, and Nb (col. 6, ln. 60-61).
11. Regarding claim 28, Figure 3D of Simpson shows an electrochemical passivator (330) coupled to at least a portion of a surface of the at least one vertically aligned carbon nanofiber.
12. Regarding claim 29, Simpson discloses the electrochemical passivator including a dielectric layer including at least one member selected from the group consisting of SiO₂, Si₃N₄ and a polymer (col. 7, ln. 7).
13. Regarding claim 30, Figure 3G of Simpson shows a tip of the at least one vertically aligned carbon nanofiber being not passivated.
14. Regarding claim 31, Simpson discloses a buffer between the at least one vertically aligned carbon nanofiber and the electrically conductive interconnect (col. 11, ln. 18).
15. Regarding claim 32, Simpson discloses the buffer including at least one substance selected from the group consisting of Ti, W, Mo, and titanium nitride (col. 11, ln. 18).

16. Regarding claim 33, Figure 10E of Simpson shows the at least one vertically aligned carbon nanofiber including a plurality of fibers that are individually electrically addressable via the electrically conductive interconnect.
17. Regarding claim 34, Figure 3G of Simpson shows a parallel lead (310, 340) for active capacitance cancellation coupled to the electrically conductive interconnect.
18. Regarding independent claim 35, Figure 3G of Simpson shows a sensor (col. 6, ln. 3) comprising an electrically conductive interconnect (305) formed on at least a part of an insulating surface on a substrate (300) and at least one vertically aligned carbon nanofiber (360) coupled to the electrically conductive interconnect.
19. Regarding independent claim 36, Figure 3G of Simpson shows a field emitting array (col. 5, ln. 56) comprising an electrically conductive interconnect (305) formed on at least a part of an insulating surface on a substrate (300) and at least one vertically aligned carbon nanofiber (360) coupled to the electrically conductive interconnect.
20. Regarding independent claim 37, Eldridge discloses a kit comprising an electrically conductive interconnect (512) formed on at least a part of an insulating surface of a substrate (508) and at least one fiber (502) coupled to the electrically conductive interconnect.
21. Regarding claim 38, Simpson discloses the kit comprising instructions (col. 10, ln. 48-49).
22. Regarding new claim 39, Figure 3D of Simpson shows an electrochemical passivator (330) coupled to at least a portion of a surface of the at least one vertically aligned carbon nanofiber.

23. Regarding new claim 40, Simpson discloses the electrochemical passivator including a dielectric layer including at least one member selected from the group consisting of SiO_2 , Si_3N_4 and a polymer (col. 7, ln. 7).
24. Regarding new claim 41, Figure 3G of Simpson shows a tip of the at least one vertically aligned carbon nanofiber being not passivated.
25. Regarding new claim 42, Figure 3D of Simpson shows an electrochemical passivator (330) coupled to at least a portion of a surface of the at least one vertically aligned carbon nanofiber.
26. Regarding new claim 43, Simpson discloses the electrochemical passivator including a dielectric layer including at least one member selected from the group consisting of SiO_2 , Si_3N_4 and a polymer (col. 7, ln. 7).
27. Regarding new claim 44, Figure 3G of Simpson shows a tip of the at least one vertically aligned carbon nanofiber being not passivated.
28. Regarding new claim 45, Figure 3D of Simpson shows an electrochemical passivator (330) coupled to at least a portion of a surface of the at least one vertically aligned carbon nanofiber.
29. Regarding new claim 46, Simpson discloses the electrochemical passivator including a dielectric layer including at least one member selected from the group consisting of SiO_2 , Si_3N_4 and a polymer (col. 7, ln. 7).
30. Regarding new claim 47, Figure 3G of Simpson shows a tip of the at least one vertically aligned carbon nanofiber being not passivated.

Response to Arguments

31. Applicant's arguments have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

32. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Merkulov (US 6649431) discloses carbon tips with expanded bases.

33. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

34. A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Art Unit: 2879


Contact Information


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin Quarterman whose telephone number is (571) 272-2461. The examiner can normally be reached on M-TH (7-5:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimesh Patel can be reached on (571) 272-2457. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272-2457.

Kevin Quarterman
Examiner
Art Unit 2879

kq 
August 6, 2004


Joseph Williams
Examiner
Art Unit 2879